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Edition 1.0 2019-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Railway applications – Rolling stock – Electrical equipment in trolley buses – Safety requirements and current collection systems

Applications ferroviaires – Matériel roulant – Équipements électriques des trolleybus – Exigences de sécurité et systèmes de captage de courant

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RAILWAY APPLICATIONS – ROLLING STOCK – ELECTRICAL EQUIPMENT IN TROLLEY BUSES – SAFETY REQUIREMENTS AND CURRENT COLLECTION SYSTEMS

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International Standard IEC 63076 has been prepared by IEC technical committee 9: Electrical equipment and systems for railways.

This publication is based on EN 50502:2015.

The text of this standard is based on the following documents:

FDIS	Report on voting
9/2530/FDIS	9/2543/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

RAILWAY APPLICATIONS – ROLLING STOCK – ELECTRICAL EQUIPMENT IN TROLLEY BUSES – SAFETY REQUIREMENTS AND CURRENT COLLECTION SYSTEMS

1 Scope

This document applies to electrical systems aboard vehicles of the trolley bus type, as defined in 3.1, fed with a nominal line voltage (U_n) between 600 V DC and 750 V DC.

This document defines the requirements and constructional advice, especially to avoid electrical danger to the public and to staff. Where special requirements exist for trolley buses, advice is given for mechanical and functional safety, as well as for protection against fire.

This document covers vehicles intended for public transportation. This document applies to:

– trolley buses without on-board isolation interface from the contact line,
– buses with a current rail for guidance in the road surface,
– guided buses with bipolar roof current collectors.

This document does not apply to:

a) electric driven vehicles fitted only with an internal power supply:
   1) hybrid vehicles,
   2) diesel-electric vehicles,
   3) fuel-cell vehicles,
   4) battery-powered vehicles,
b) vehicles with safe protective bonding:
   1) rubber-tyred commuter trains,
   2) guided buses with power supplied by a separate current rail,
   3) rail-guided buses with unipolar roof current collector,
c) vehicles operated outside publicly accessible areas:
   1) electrically driven lorries on motorways.

Guidance and current rails are special solutions and, at this time, are not subject to standardization, unlike trolley bus current collectors and overhead contact lines.

This document refers mainly to earthed networks, but reference is made also to galvanically insulated networks.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60077 (all parts), *Railway applications – Electric equipment for rolling stock*

IEC 60077-1, *Railway applications – Electric equipment for rolling stock – Part 1: General service conditions and general rules*